

REMARKS

Claims 1, 2, 5 – 7, and 11 - 16 are now present in this application. Claims 1 and 11 are independent. By this response, claim 10 is cancelled and claim 11 is amended. Reconsideration of this application, as amended, is respectfully requested.

Claim Objections

The Examiner has objected to claim 10 as failing to limit the subject matter of a previous claim. Claim 10 is cancelled, rendering this rejection moot.

Interview

Applicants' representative conducted a telephone interview with the Examiner on June 29, 2011. During the course of the interview, both formal matters related to the Information Disclosure Statement and substantive matters related to the claims were discussed. A summary of each follows:

Information Disclosure Statement

During the interview, Applicants identified the appropriate statement of relevance related to JP 61-162124, which was filed Applicants' information disclosure statement of January 4, 2011 and the Examiner agreed that this reference should be properly considered.

Inorganic Wetting Agent

Applicants and Examiner discussed the interpretation and meaning of the term "inorganic wetting agent." Applicants pointed to paragraph [0135] of the specification (referring to paragraph numbers from Publication 2007/0123422), which states that "negative charged pre-moistening-water with the moistening agent (approx. 2% in solution) is sprayed." (Para. [0135] of Specification). Applicants also point to paragraph [0124], which states that "to the pre-moistening water will be a wetting agent added with 2% in the solution." (Para. [0124] of the Specification).

Applicants noted that read in the context of the specification, the term "wetting agent" would be understood, by one skilled in the art, to mean a substance used to alter the surface tension of water. Applicants also noted that one of ordinary skill in the art would understand that

the application of a static electrical charge to a water droplet will not have the surface-tension-altering effect caused by a surfactant.

Applicants therefore respectfully suggested, and the Examiner agreed, that one of ordinary skill in the art would understand, when reading the claims in light of the specification, that the “inorganic wetting agent” of claims 1 and 11 is not water but is instead something added to water. The Examiner further agreed that none of the applied references teach or suggest using such an “inorganic wetting agent.”

Rejections under 35 U.S.C. §103

Claims 1, 2, 5 – 7, and 10 - 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,816,498 to Smith (“Smith”) in view of U.S. Patent 6,173,527 to Pryor (“Pryor”) and U.S. Patent 5,213,759 to Castenberg (“Castenberg”). Insofar as it pertains to the presently pending claims, this rejection is respectfully traversed.

Prior Art

Smith discloses a method and an apparatus for spraying ozonated water on plants to treat bacterial, fungal and viral diseases. The apparatus comprises a water tank (140), an oxygen generator (110), an electricity generator, an ozone generator (115) for producing ozone gas, a venturi-injector (125) and a pump (165) for mixing the ozone gas with the water, a tractor for transporting the apparatus and spray booms (210) with spray heads (220). The ozone content in the water tank (140) is constantly monitored and if necessary, the water is directed from the water tank (140) to the venturi-injector (125) for enrichment with ozone. The ozone content is approximately in the range of 0.1 to 0.4 ppm. In contrast to the invention, there is no wetting with an inorganic wetting agent described.

Pryor describes a method of treatment of agricultural top soil with ozone containing gas to increase the growth of plants in the top soil. The ozone gas may be injected into the top soil with a carrier gas like for example CO₂. There is the possibility that the top soil is oversaturated with water preliminary to the ozone treatment. After the oversaturation with water, the soil may

also be partially dried before starting the ozone treatment. In contrast to the invention, there is no use of an inorganic wetting agent.

Castberg discloses a method of sterilization which comprises subjecting micro-organisms to UV radiation through an atmosphere of an inert gas or an atmosphere of ozone gas. The inert gas is specified as nitrogen, argon, helium, neon, krypton or xenon. In the context of the prior art, carbon dioxide is mentioned as inert gas as well. Furthermore, in the context of the prior art, it is mentioned that ozonated washing water may be used together with UV radiation. In contrast to the invention, there is no method for the protection of plants described. Furthermore, wetting with an inorganic wetting agent is neither discussed nor described.

Claim 1

Independent claim 1 pertains to a “method for the protection of crops to control attacks of fungus, yeast, bacteria, virus and insects, the method comprising: a first step of wetting plants with an inorganic wetting agent by means of dipole- electrical air jet spray-technology; and first irradiating said plants with UV-C light; a second step of spraying said plants with ozonated water by means of said dipole- electrical air jet spray-technology; and second irradiating said plants with UV-C light.”

Pryor describes a treatment of soil with ozone subsequent to an oversaturation of the soil with water. It is explicitly mentioned that a treatment with ozone gas is advantageous compared to a treatment with ozonated water. Additionally, according to Pryor, the soil is in the first step oversaturated with water and not just wetted. Smith suggests the use of ozonated water in the spraying step of claim 1 and Castberg suggests combining the ozonated water with UV radiation.

None of the references, however, taken either alone or in combination (assuming the references may be combined, which Applicants do not admit) teach or suggest the use of an inorganic wetting agent during the wetting step of claim 1.

Applicants therefore respectfully submit that all of the references applied are independently and jointly (assuming the references may be combined, which Applicants do not admit) deficient in their teachings with respect to the “inorganic wetting agent” required by independent claim 1. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Claim 11

Applicants respectfully note that independent claim 11 also pertains to “wetting the plants with an inorganic wetting agent.” Applicants therefore respectfully submit that the presently applied references are deficient in their teaching with respect to claim 11 for at least the same reasons as set forth with respect to claim 1. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Dependent Claims

Applicants respectfully submit that claims 2, 5 – 7, and 12 - 16 are allowable at least by virtue of their dependency from independent claims 1 and 11. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

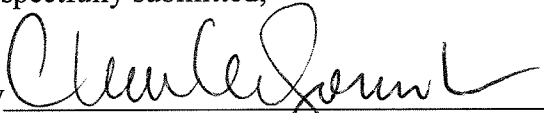
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Naphtali Y. Matlis, Registration

No. 61592 at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

Dated: July 11, 2011

Respectfully submitted,

By 

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